AUTODOC CLUB

How to change control arm on a car – replacement tutorial

VIDEO TUTORIAL



REPLACING A CONTROL ARM

REQUIRED TOOLS:



- Tap wrench
- Wheel impact socket
- Impact socket
- Ball joint puller set
- 3-Arm Gear Puller
- Jack

BUY TOOLS

Please note!

- A suspension arm allows the wheel to change its position in relation to the car body or subframe
- There are many types of arms, but they are similar in operation and are replaced in much the same way
- Bushings only allow movement of the arm about one rotation axis
- The connection between the central and outer bushing sleeves is flexible. This enables movement of the bushing or mating part
- A ball joint allows not only mobility, but also rotation of the assembly
- Suspension play and noise are indications of worn bushings and ball joints

1 To remove any type of suspension arm, you should first access its fasteners and familiarise yourself with its design



Important!

- In the MacPherson strut suspension system, the ball joint is connected to the steering knuckle
- The front and rear bushings are attached to the subframe or body

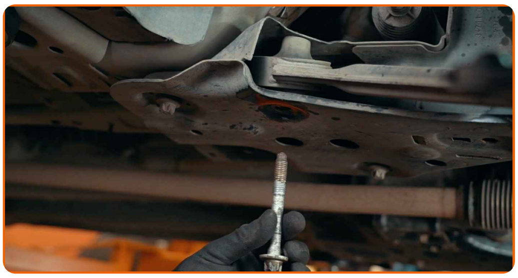
2 Loosen the fasteners of the bushings without unscrewing them completely



3 Unscrew the ball joint fastener and remove the ball joint from the steering knuckle



4 Remove the fasteners of the bushings and dismount the arm



Please note!

- The ball joint of the arm can be removable or permanently fixed to the arm
- The ball stud can be of two types:
- A tapered one is secured by a nut and requires pressing out with a special puller. These pullers vary in height, angle, and jaw opening
- A cylindrical one is inserted in a clamp, which should be slightly spread beforehand

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To avoid injury, proceed carefully when removing the arm as its edge is spring-loaded



Be careful!

- When one arm bushing is unscrewed, the other is still under load
- In this design, the rear bushing is only fixed in the vertical direction
- The front one, on the other hand, is secured by its fastener against longitudinal movement

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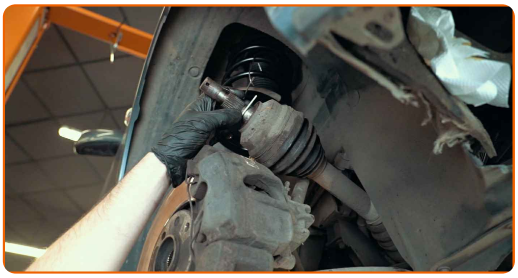
To remove the arm, first disconnect the front bushings, then the rear one



Please note!

- For a certain type of bushing, there are retaining grooves on the subframe that set the installation direction of the inner sleeve of the bushing
- These bushings can only be removed in a certain position
- On some cars, the rear bushing is attached to the subframe with a bolt that is inserted from above
- This means that in order to remove the arm, you should first access it and possibly remove other components

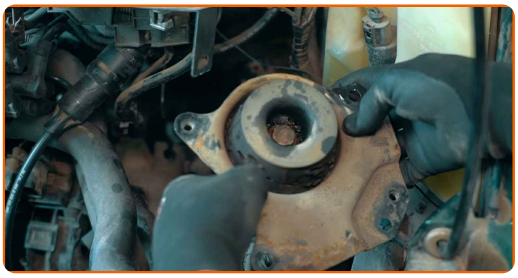
7 The design in which the front bushing is positioned vertically is common. To remove its fastening bolt, you should move aside the CV axle



Caution!

- In most cases, the arms are replaced on both sides of the axle in the same way
- An exception is removal of the bolt of the front bushing on some vehicles with automatic transmission

8 It might be necessary to first remove the gearbox mount and raise the gearbox a little together with the engine



9 The fasteners of the horizontally positioned bushings should only be tightened when the arm is in its working position. This means the position in which the arm is loaded by the vehicle’s weight



10 In most cases, you have to jack up the arm until it is almost horizontal. This procedure can be carried out with the help of a jack and some support



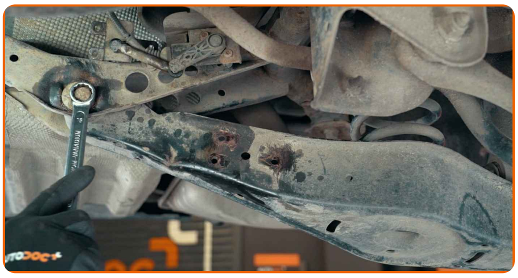
AUTODOC recommends:

- Do not jack up the central part of the ball joint as this could damage it
- Do not fasten the bushings while the arm is not in its working position
- Otherwise, when the car is set back on the ground and the arm takes its working position, the bushings will be overly strained
- Later on, when the car is in use, the suspension travel will exceed the working range of the bushings, causing these to fail

11 The lower and upper control arms may have the bolts responsible for the wheel alignment. Before removing such a bolt, make a mark to guide you when reinstalling it



12 However, in any case, after completing the work, have the wheels aligned on a wheel alignment machine



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The suspension may be designed so that the spring permanently presses on the arm. Before removing an arm of this kind or its fasteners, jack it up to reduce the spring force

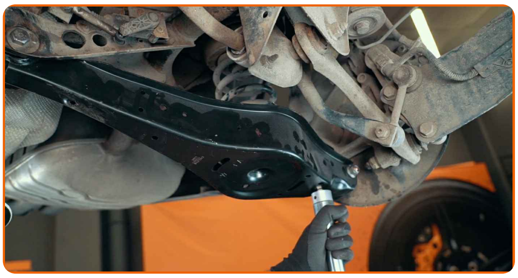


Important!

- Proceed carefully to avoid injury
- Be sure to use new fasteners

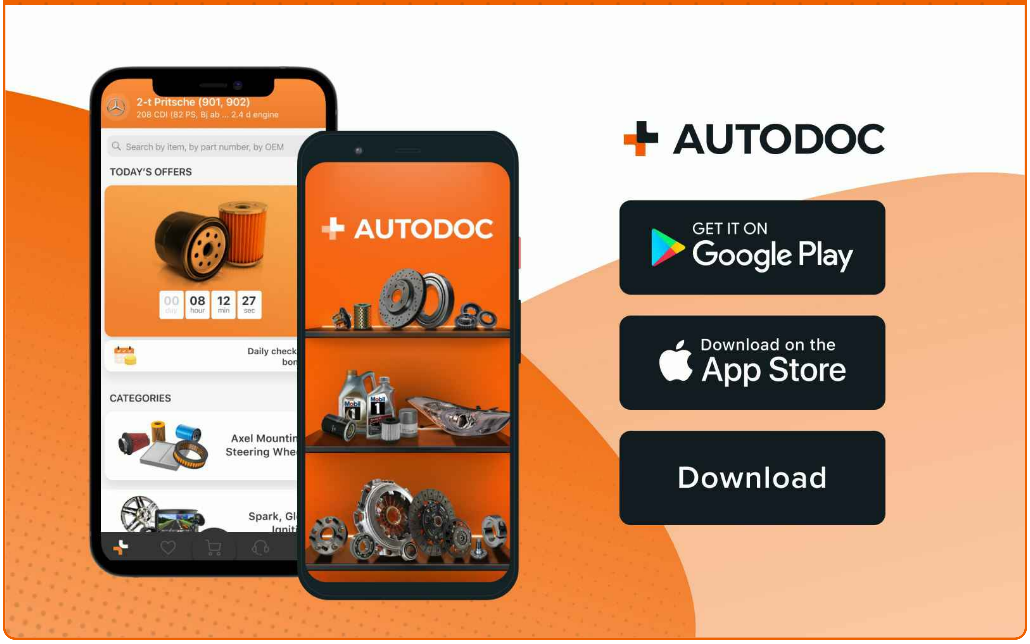
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Only tighten the fasteners of the arm bushings when the arm is jacked up to its working position



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